



# Exploring First Nation Elder Women's Relationships with Food from Social, Ecological, and Historical Perspectives

Hannah Tait Neufeld,<sup>1</sup> Chantelle Richmond,<sup>2</sup> and The Southwest Ontario Aboriginal Health Access Centre<sup>3</sup>

<sup>1</sup>School of Public Health and Health Systems, The University of Waterloo, Waterloo, Ontario, Canada; <sup>2</sup>Department of Geography, Western University, London, Ontario, Canada; and <sup>3</sup>Southwest Ontario Aboriginal Health Access Centre, London, Ontario, Canada

## ABSTRACT

**Background:** The ongoing negative health effects of colonization have disproportionately affected Indigenous women, who are disproportionately affected by diabetes, food insecurity, and undernutrition. Indigenous women also perceive their health less positively than men do. This article draws theoretically from the socio-ecological model to explore health inequalities experienced by Indigenous women associated with the intergenerational effects of the residential school legacy, specifically related to food practices.

**Objectives:** Study objectives were to describe and compare the historical context of present-day urban and rural food environments, and explore the hypothesis that food insecurity may be associated with cultural loss resulting from the intergenerational trauma of residential schools in this region of southwestern Ontario, Canada.

**Methods:** Framed by a larger community-based participatory study, life history interviews took place with 18 Elder women living on- and off-reserve in southwestern Ontario, Canada.

**Results:** Women discussed painful circumstances of displacement from the land and social disconnection from families and communities. The 10 participants who were residential school survivors conveyed the intergenerational effects of loss, responsibility, lack of support, and an altered sense of identity as narratives of survival. Six women had moved away from their home communities, which created challenges to fully engage in local food procurement and sharing practices. These altered geographies present practical limitations, along with apparent mechanisms of social and cultural exclusion.

**Conclusions:** Research on Indigenous Peoples' food systems requires further analysis of the root causes of disparities in the context of societal and gender relations. Food sovereignty has been the domain of women, who have led movements aimed at both social and environmental justice. Unraveling the historical, social, and environmental determinants of Indigenous food knowledge will support and guide community and policy recommendations, highlighting the ongoing effects of residential schooling and other indirect examples of environmental dispossession that have disproportionately affected Indigenous women. *Curr Dev Nutr* 2020;4:nzaa011.

**Keywords:** Indigenous health, food practices, residential schools, gender, social determinants, food and nutrition of Indigenous Peoples

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Address correspondence to HTN (e-mail: [hannah.neufeld@uwaterloo.ca](mailto:hannah.neufeld@uwaterloo.ca)).

Abbreviations used: IRSS, Indian Residential School System; OCAP, Ownership, Control, Access, Possession; SEM, Socio-Ecological Model; SOAHAC, Southwest Ontario Aboriginal Health Access Centre.

## Introduction

The WHO recognizes colonization as the single most significant social determinant of health among Indigenous Peoples worldwide (1). To address the ongoing legacies of colonial policies such as the Indian Residential School System (IRSS) in Canada, the Truth and Reconciliation Commission made 94 Calls to Action (2). Many of these Calls focus on narrowing the extreme disparities in measures of health and well-being that continue to exist between Indigenous and non-Indigenous groups in Canada (3–5). In comparison with Indigenous men, Indigenous women are disproportionately affected by type 2 diabetes (as well

as being affected by gestational diabetes) and are affected to a greater degree by chronic food insecurity and undernutrition (6, 7). Indigenous women also perceive their health less positively than men do (8). These disparities are rooted powerfully in experiences of colonialism, specifically in gendered policies that effected profound social and cultural disruption in Indigenous lives, including the exploitation of lands, resources, and cultural practices (9). Loss of language, culture, and disconnection from the land resulting from historical tragedies such as the IRSS have been identified as broadening these socioeconomic inequalities and health disparities (8, 10, 11). The combined effects of colonization are apparent in all aspects of Indigenous Peoples' health and

well-being, including their mental, emotional, and spiritual wellness (12), and can directly undermine the resilience of individuals and communities (7). However, what is not well understood are the ways in which contemporary food security may be affected by cultural loss. Building from this broad question and framed by a community-based study and qualitative interviews with 18 women, this article seeks to understand how trauma and cultural loss associated with experiences of residential schools affect modern patterns of food security. The objectives of the study were to describe and compare the historical context of present-day urban and rural food environments, and to explore the hypothesis that food insecurity may be associated with cultural loss resulting from the intergenerational trauma of residential schools in this region of southwestern Ontario.

### **Indigenous health and the Socio-Ecological Model: opportunities and challenges**

The Socio-Ecological Model (SEM) is a framework that integrates multiple levels of influence, including intrapersonal, interpersonal, institutional, community, and public policy influences (13), to better understand health and human behaviors. The ecological component of the model refers to the examination of relations between organisms and their environments. The SEM is based on the idea that the health of an individual is influenced by many different components, including physical, social, and political environments. More specifically, the model provides the opportunity to address and interpret the ways in which health and human behavior are reflective of one's interaction with or embeddedness in different social and political systems. This includes at intrapersonal and interpersonal levels (the microsystem); organizational change at community and institutional levels (the mesosystem); and policy change at the level of systems or structures (the macrosystem). The SEM is a complex model with a potentially holistic perspective, as it incorporates several levels of influence into a particular phenomenon.

As an adapted framework, the SEM may be congruent with Indigenous concepts of health, which are holistic, focus on language and place, and value relationships (14). Food systems are affected by many factors at various levels, such as personal preference, living situation, food availability, food accessibility, and food prices. These factors fit well within the SEM levels of influence. Previous research examining food consumption practices and use of traditional foods in First Nation communities has adapted an ecological model (15). An ecological model is fitting because food choices are not simply made by individuals, but are influenced by a range of social and environmental processes, including the interactions or relations among these factors.

As we strive to understand contemporary patterns of Indigenous health and health behaviors, it is critically important to consider the historical contexts and intergenerational processes that underlie many of these complex patterns. In the Canadian literature, the concept of environmental dispossession extends and illustrates the structural and ecological impacts of colonization on the health and well-being of Indigenous Peoples in Canada (16). Theoretically informed by a critical population health perspective, environmental dispossession refers to the processes that have reduced Indigenous Peoples' access to the land and resources of their traditional environments that can affect health in direct and indirect ways. As Indigenous communities experience

dislocation from their traditional land and territory, for example, there is a decreased ability to participate in the traditional food system and economy. This is especially true for urban Indigenous populations. Whether because of residential schools, community relocation, urban migration, a contamination event, or some other cause, affected communities lose the ability to use and enjoy the resources of their homelands, and, over time, this disconnection can lead to the loss of Indigenous knowledge, reduced use of language specific to the land, limited social connections, and decreased value being placed upon the responsibilities and morals inherent to traditional food systems, such as sharing (17, 18).

Despite the growing base of evidence to suggest that Indigenous health and health behaviors are deeply rooted in disconnection from the land, health promotion programs tend to focus on behavioral change at the individual level, with little recognition of the ways in which experiences of environmental dispossession underpin contemporary patterns of food insecurity that includes not only lack of food, but unhealthy and unsustainable consumption patterns and lifestyles. This is not to say that movements to revive traditional food practices are completely absent from the literature. Knowledge has survived and is being shared despite all of these assaults. To promote health and wellness and equity among Indigenous individuals, families, and communities, a more comprehensive understanding of the structural, historical, and environmental impacts on dietary practices and food systems is required (19). Research investigating the dietary practices of First Nation communities has been almost exclusively deficit-based, with considerably less attention given to learning how larger food systems and environments have been affected by Indigenous Knowledge (IK) loss resulting from indirect processes of environmental dispossession. The complex mechanisms by which chronic food insecurity may be related to cultural loss, or to the intergenerational historical trauma of residential schools, have not yet been explored.

The outcomes of this complex framework of health and social determinants are the resulting structural violence of food insecurity, unemployment, and lower levels of educational attainment that continue to pervade not only individuals, but families, communities, and Nations. Resources within communities may be affected by the prevalence and severity of residential school attendance (20). Indigenous, traditional, or country foods are central to health and culture for Indigenous Peoples (21–23), including to physical, social, emotional, and spiritual well-being (24). [Indigenous or local traditional foods refer to all food species available to a particular culture that are derived from local natural resources, and the accepted patterns for their use within distinct cultural groups (21).] Processes of environmental dispossession such as those aforementioned have decreased access to these foods, leading to their gradual replacement with marketed or manufactured products, which has had dramatically negative consequences (25, 26), such as higher intakes of saturated fats and refined carbohydrates.

These dietary changes are leading to significant changes in physical health status, but have also had effects on emotional, spiritual, and mental health both on- and off-reserve (22, 27). Causes are rooted in these structural inequalities that have limited access to land and other resources, resulting from environmental degradation and competing

demands for land (7). Locally harvested and hunted sources of foods have greater biodiversity and tend to be more nutrient-dense in protein and essential micronutrients (28, 29).

## Methods

The research project is an extension of previous collaborative research between the Southwest Ontario Aboriginal Health Access Centre (SOAHAC) and researchers from the Indigenous Health Lab at Western University. SOAHAC provides holistic health services as 1 of 10 Aboriginal Health Access Centres in Ontario. Traditional and Western health practices are available to >2000 clients in London, Ontario and nearby at Chippewa of the Thames First Nation (30). This approach was adopted to ensure that the research project overall took into consideration the importance of capacity-building and knowledge formation of benefit to all research partners (31, 32). The overall study adhered to the principles of OCAP (ownership, control, access, possession) as insisted on by the research partner (SOAHAC). [OCAP<sup>®</sup> is a registered trademark of the First Nations Information Governance Centre ([www.fnigc.ca](http://www.fnigc.ca)).] In practical terms, OCAP is often considered a starting point, as it is grounded primarily in First Nations research (33). The concepts of “ownership” and “possession” have also been recently challenged as colonial in sentiment (33), yet in application they set the course for this research partnership.

The SOAHAC Food Choice Study originally started as a 2-phase, community-based participatory project in 2008. The study was initiated by SOAHAC and designed in collaboration with Western University to examine in 2 phases processes underlying dietary practices, including circumstances of food security and sources of foods, including traditional foods among urban and on-reserve First Nation households in southwestern Ontario. Findings from the first phase of the study, the Food Choice Survey ( $n = 229$ ), demonstrated that urban and reserve-based First Nation families in this region frequently experience food insecurity (C Richmond, M Steckley, HT Neufeld, R Bezner-Kerr, R Watson, B Dokis, SOAHAC. Social and spatial determinants of food insecurity among First Nations families in southwestern Ontario, Canada. Manuscript under review). Spatial differences in food sources and the determinants of food security were also noted, with the urban First Nation families more often describing circumstances of poverty associated with food insecurity, as well as more limited access to traditional foods, than those living on reserve. The second phase of the study included interviews with 29 urban and on-reserve First Nation mothers, drawn as a subset from the first phase of the study. Women talked about food security in their communities as not only dependent on access to various social determinants of health, such as income or transportation (C Richmond, M Steckley, HT Neufeld, B Dokis. First Nation mothers explain the social determinants of healthy eating: results from a community-based study. Manuscript under review). Access to knowledge including Indigenous knowledge, land-based activities, contact with Elders, and increased cultural capacity around food were also identified as important determinants of food security, health, and well-being (22). As a third phase to this study, life history interviews were undertaken with female Elders from the same urban and reserve communities. This portion of the study was aimed at addressing research gaps revealed

by the initial SOAHAC study by focusing on potential mechanisms that have had an impact on the intergenerational transfer of knowledge, as well as on access to and availability of traditional foods, within urban and reserve-based First Nation communities in southwestern Ontario.

Interviews with Elders began in the fall of 2014. As part of the recruitment, lunch events were held at 2 SOAHAC sites, 1 in London and 1 at a nearby reserve, to share the objectives of the study with women interested in participating. A purposive sample of 18 Elders was recruited. A life history methodology was used to encourage the exploration of Elders' individual experiences within a macrohistorical framework (34, 35). Interview questions were designed collaboratively with SOAHAC staff and piloted before use. Key themes that were explored as part of the open-ended interview guide included 1) historical and environmental change and availability of traditional foods; 2) social and cultural determinants of local food security; 3) geographic and economic determinants of traditional food access; and 4) traditional knowledge related to food harvesting, preparation, and storage practices.

Nine of the 18 women interviewed were living in the city of London at the time of their interview. The other half were living in First Nation communities located within 30 km of the city. London, Ontario, has a population of 492,200, of which ~20,000 self-identify as First Nation, Métis, or Inuit (36). The home communities identified by the participants included Kettle Point (3), Chippewa on the Thames (5), and Oneida on the Thames (10). Demographic data for all participants appear in Table 1. Pseudonyms have been used to protect the identities of participants. Study participants living in London ranged in age from 51 to 69 y, with a mean age of 60 y. Those living in reserve communities were from 65 to 76 y old, with a mean age of 71 y. More women in the city were living on their own (10). One woman in London was living with a partner at the time of her interview, compared with 4 in the reserve communities. On average, women in the city had raised 2.4 children, slightly less than the 2.5 on-reserve. Most grew up as part of large families, some with as many as 11 siblings. Over half of the participants self-disclosed that they were residential school survivors. As children, they or their parents had attended Mount Elgin Industrial School, which was located on reserve land (see Figure 1).

All interviews were audio-recorded with permission and transcribed verbatim. Study participants were encouraged to collaborate during the study. Participants reviewed their own transcripts and took part in community potlucks to discuss and support the development of the analytical framework. Thematic analysis was employed, along with coding and matrix queries, to identify key themes and relations in the data, including categories and identifiers such as place and residential school experiences (37). Interview data and field notes were organized and coded using NVivo (QSR International) (38). The software was used to browse, search, and interpret the interview text through the creation of models and memos (39).

The study received ethical approval from SOAHAC's Board of Directors, as well as from Western University's Non-Medical Research Ethics Board. All participants were informed of the study before giving their consent. Each participant also received a \$50 food voucher for her time.

**TABLE 1** Participants' descriptions<sup>1</sup>

Participant	Age	Residence	Family	Home community
1. Edna	72	Reserve	3 siblings; 1 son	Chippewa
2. Mabel <sup>2</sup>	70	Reserve	7 siblings; 3 children, 1 grandchild	Oneida
3. Violet <sup>3</sup>	75	Reserve	10 siblings; 5 children, 10 grandchildren, 12 great-grandchildren	Oneida
4. Audrey <sup>3</sup>	54	London	4 siblings; 2 children	Kettle Point
5. Hilda	51	London	1 sibling; 1 child	Chippewa
6. Mary <sup>2</sup>	58	London	10 siblings	Oneida
7. Beverley <sup>3</sup>	52	London	4 siblings; 2 children	Oneida
8. Ruth <sup>3</sup>	62	London	6 siblings; 5 children	Oneida
9. Bonnie	67	Reserve	Only child; 4 children	Oneida
10. Alice	67	London	9 siblings; 2 children, 4 grandchildren	Kettle Point
11. Martha <sup>3</sup>	69	London	8 siblings; 2 children, 2 grandchildren	Oneida
12. Carol	61	London	6 siblings; 3 children, 14 grandchildren; living with partner	Oneida
13. Joan <sup>2</sup>	65	Reserve	11 siblings; 2 daughters, 9 grandchildren, 2 great-grandchildren; living with partner	Chippewa
14. Peggy	71	Reserve	11 siblings; 4 children, 8 grandchildren; living with partner	Chippewa
15. Doris <sup>3</sup>	62	London	6 siblings; 4 children	Oneida
16. Elaine	68	Reserve	5 siblings; 2 children; living with partner	Chippewa
17. Rose <sup>2</sup>	75	Reserve	7 siblings; 1 son	Oneida
18. Louise	76	Reserve	5 siblings; 4 children, 23 grandchildren, 18 great-grandchildren; living with partner	Kettle Point

<sup>1</sup>Total  $n = 18$ ;  $n = 9$  Urban,  $n = 9$  Reserve.

<sup>2</sup>Attended residential school.

<sup>3</sup>Parent or parents attended residential school.

## Results

This section presents the main findings of the thematic analysis of the interviews. Herein, components of the social environment are presented from the participants' perspectives, followed by illustrating their combined and complex individual impacts with food systems in their home Territories.

### Macrohistorical influences

These historical circumstances are presented to frame the stories of the women who participated in the life history interviews. For the sur-

vivors who were directly affected by life at Mount Elgin or had parents who attended the school, these experiences influenced both their physical/ecological and social environments and ultimately, we argue, their individual relations with food. Ten out of the 18 participants disclosed that they were residential school survivors. They had either attended residential school during their childhoods or were intergenerational descendants. As Audrey and Joan shared:

"I'm a second generation of her effects. I carry the same stuff that she drilled into me. And it stopped at my children because I was starting to do what she did to me." (Audrey, London)



**FIGURE 1** Children with milk buckets at Mount Elgin (1909). United Church of Canada Archives (2017). <http://thechildrenremembered.ca/school-locations/mount-elgin/>.

"I don't even remember how long I was there. I don't know if it was grade 3 when we went over to Mount Elgin. Then we got shipped off to London in grade 6." (Joan, Reserve)

The interviews of those whose lives had been directly affected by residential school (as children who attended or those whose parents had attended) were compared to the interviews of those who had not been directly affected. The most dramatic accounts were from those who had survived residential school themselves (as indicated in Table 1), in their descriptions of the intergenerational impacts on the social structures of communities and families. The following quote from Martha describes her parents' experiences at residential school, as well as those of some of her older siblings. It was because of her siblings' mistreatment at Mount Elgin that her family moved away from the area. As the following quote conveys, she felt disconnected from her mother's home community of Oneida, and has lived in London since the age of 8 y to get away from an abusive home environment:

"Only the 3 oldest ones from our family lived on the reserve. My parents moved off the reserve when the 3 oldest ones went to residential school, and, seeing how they were treated, that's why they moved off and moved into St. Thomas. They were in residential school themselves, but they—the next generation below, my 2 oldest sisters and oldest brother—they were treated worse than them. So that's why I've never lived on reserve." (Martha, London)

Disconnection from land and place, particularly for women living away from their home communities for most of their lives, like Martha, tended to be associated with dramatic life events. Although she spent her early years on-reserve, Mabel came to know significant displacement and loss in her life. Her mother died in childbirth when Mabel was very young, and she and her 7 siblings were sent to live with her grandmother. When her grandmother passed away, Mabel was sent to residential school. As she describes in this quote, many of her family members were also leaving the community at this time:

"When I was 13 or 14 I went to the residential school because there was only my 2 brothers and I home with no one looking after us. So they sent me away and my older sister came to look after my other 2 brothers who were still there. [My grandmother] had passed away and my aunt moved to Chicago with her husband. So everybody started going, you know ... and I remember when I came home because the next year I was going to be going to high school. I only went there for 1 year for grade 8 and then I'd come home and I was going to be going to [London] for grade 9. Yeah, I came home. I [found I] had no clothes [there]. I don't know what they did with them all. Maybe they thought I wasn't coming home." (Mabel, Reserve)

Dislocation from the land and from the local economy owing to historical circumstances such as the residential school system were not the only determinants to negatively affect local food systems in these communities. With greater reliance on the wage economy, agriculture, hunting, fishing, wild food gathering, preparation, and preserving practices became less common as parents began to work and often live away from their homes and families on the reserve. Alice, who left her home community for the city at age 13, recalled:

"I did have [corn soup] as a child. I had one aunt that made that, but my uncle worked at the refinery in Sarnia. It wasn't a necessity

to have it. It was a treat. I mean like Oneida celebrate a lot more traditional things than I ever knew of on Kettle Point. I just wish there were more of that in Kettle Point, but a lot of our people, too, on Kettle Point, they worked in Port Huron and Detroit. My aunt went over there to be a maid because she couldn't get a job up this way anywhere. Some of the ladies were housecleaners over there and their husbands would work in the steel and the automotive [industries]." (Alice, London)

This transition to waged labor, therefore, further dispossessed parents and families of their physical environments, as they were no longer able to depend on the land for sustenance. Rose remembered as a child living with her grandmother and 7 brothers and sisters through periods of scarcity and food insecurity in the household:

"I know we ran out of food once. All we had was just flour, and what my grandmother used to do is just have water with milk and this flour. I don't know how she'd do it, but [she'd] mix it up in her hand. It would fall into there and form a little, like, an ear ... curly stuff like that. Then we'd eat that. And sometimes we'd just have potatoes to eat. We had a big box upstairs filled up with potatoes for the winter." (Rose, London)

### Social environments

Various mechanisms of displacement, and loss of land and community for many of the study participants, shifted the social construction of families, thereby directly influencing social environments. Like Alice, Audrey left Kettle Point when she was a child for school and moved around a lot because her father was in the army. Her mother had attended residential school. She describes the structural impact of other federal policies that influenced her own family and community:

"If the woman has the skills and the knowledge to take care of her family, I think that we're better equipped and we are fighters. Like, at one time, we didn't even have a voice. They took away our identities if we married non-Natives, but in residential school they drilled it into people's heads that you were nothing unless you lived mainstream. So a lot of my aunts and cousins and myself, we married white men, but we weren't on the same wavelength. I don't know how to describe it because they're coming from a different viewpoint from what we were used to. So we would never connect totally, and that caused a lot of breakdowns in relationships and families." (Audrey, London)

As Audrey alludes to, within families, these experiences of social and interpersonal reconstructions, discrimination, and resulting fractured relationships tended to place a significant burden on women, especially older female siblings in a family. Women growing up in larger families, and those like Rose, Mabel, and Ruth who were essentially orphaned at early ages, were particularly vulnerable and frequently expected to keep their families together. As Ruth, the oldest of 6 children, stated, "that's the way I've spent my life, is things fall on my shoulders and I take care of them." Ruth's mother attended residential school for many years. She died by suicide when Ruth was only 9 y old, and left her to manage an abusive father and 5 younger siblings. Later, as a parent herself, Ruth felt that these early experiences that included a loss of freedom, access to knowledge, and safety had caused her to overindulge her own children, to protect them from going through what she had gone through. She said, "there's so many times in my life I had to do it alone and I find with my kids I've gone overboard. I'm an enabler instead of letting them

tough some things out. I go and ... cushion it.” As a child, Rose recalled not having choices when it came to food in particular. In her household of 8 children, you “had to eat what was prepared for you.” Being a parent, Audrey also made a conscious decision to be different as a mother and let her kids “be kids.” She said, “I give them a choice where we didn’t have choices.”

Mabel had to help her grandmother take care of her large family of 8 children when Mabel’s mother died in childbirth. These formative experiences had a significant impact on her relation with food, as she indicates here when asked about her health:

“Health means a lot ’cause that helps me stay around a bit longer and it lets me be more independent and I like that because it seems like I was always looking after somebody when I was growing up. My brothers, and then I go to my Dad. I was one of the older ones there and I would be making all the meals and all the lunches in the morning. I just got to hate cooking.” (Mabel, Reserve)

Martha also talked about household expectations instilled in her by her mother, who also went to residential school. She credits her mother with teaching her about responsibility and industry. Out of necessity, they supported each other, living in the city without an extended community. As she explained:

“My whole family kept busy. Everybody worked. There was no idleness in our family—like, no one got to laze around. Everybody had to pitch in and help, and so it was just the way we were brought up. Through our mother and the ethics that we learned and the truthfulness and stuff like that. When a sister got sick or something, the others looked after [her] and her children ... made sure that they were looked after. Yeah, so everybody come to everybody’s aid if something happened. That’s the way we live ... with good hearts and minds.” (Martha, Reserve)

Other women talked about food as a tradition of bringing family and community together. Hilda talked about the importance of believing that “any food you have is what you put into it and you put a lot of love and it’s really good.” She went on to say that “eating and being together and helping one another, make sure everybody—you know, no one should starve ... ’cause Mother Earth provided enough stuff here for everyone.” Beverley mentioned traditional foods more specifically as being central to the health of the community:

“I think it’s important for the young ones to learn about traditional foods because something so simple is good for us instead of, like, how or why it’s important for us to eat that stuff. Like, say, for instance, if we had fish, we don’t go and put batter all over it and that’s not healthy for us, but, you know, to have something prepared in front of us and watch and learn in a healthy way.” (Beverley, London)

The teachings associated with the preparation of traditional foods and practices were conveyed by observation, but according to Violet were not as commonly practiced in her community. She recalled, however, how she learned traditional teachings from her grandparents by visiting them regularly and learning through “everyday talk.” She went on to recall sitting down with her grandmother and “learning by just observing, even, too. It wasn’t even necessarily that they were telling you things. It was just, you watched how they lived their life.” Rose, who spent much of her early life away from her community, expressed these

sentiments strongly and felt knowledge should only be shared in the home in the traditional way:

“Why would they be going to school in London to show these Natives how to cook corn soup when they should be on the reserve teaching them? They should learn from their grandma. I saw my grandmother make baskets, too. We stayed with our father’s mother, our grandmother, but our mother’s mother, she used to make baskets, too. And then she’d make oven bread outside. That’s how I learned, from watching, [you watched] your aunt or your grandma cook.” (Rose, Reserve)

### Individual impacts

Within their families and communities, many women conveyed that their lives had been full of transitions, displacement, and disconnection as a result of the many structural impacts described, with considerable responsibilities placed on them to care for and maintain the integrity of often-large families. During these women’s childhoods, parents were often physically and sometimes emotionally absent. As adults, they continued to feel trapped as women and mothers. Their day-to-day duties translated into a lack of freedom or self-determination over anything in their own lives as they continued to support their families and keep them together as a means of survival. At the start of the interviews, each participant was asked what she remembered most about growing up. Almost all immediately recollected positive experiences of childhood—being free to roam outside with friends and family, accessing and sharing foods directly from their local environments. Joan experienced residential school directly and attended Mount Elgin for 3 y. She vividly recalled experiences growing up in her home community and being out on the land:

“I just remember having a lot of fun. We were always outside playing snowball fights and sleigh riding [and] skating. We used to go down to the river and we used to have, at moonlight, we used to go down to the river and (it was frozen) go skating at 11 o’clock. In the summer we used to play baseball outside or go down to the gravel pit, swimming. We used to go across the road and eat those strawberries in the field, or we got an aunt or cousins used to live down the road farther and we used to sit up in a cherry tree eating all those cherries. Down the road from us we used to eat those apples before we went to school.” (Joan, Reserve)

All of the participants spoke about this sense of pride in their shared experiences and the desire for the retention of these collective experiences and shared knowledge. The freedom to trust in the foods prepared for your own family when they were from the local environment was expressed by several of the participants. Values such as taking care of each other, sharing food and knowledge, and learning through observation were discussed by the women who had spent the most time in their home communities. Many emphasized the importance of knowing where food comes from, its connection to the land, and those who helped to harvest and prepare it. The shared responsibility of participating in the procurement and production of food was spoken about with a great deal of pride. A lifelong resident of Kettle Point, Louise shared the pride she feels when eating traditional foods such as venison. Here, Louise refers to the teachings that she had received from living in harmony with her local environment, and the ways she listens for the sounds of the changing seasons:

"You can hear the cicadas in probably about June or July, 'cause they're telling us that food is getting ripe. Get ready. So then you start picking your strawberries, your raspberries, and all those. In the middle of the summer then you hear them singing a little harder and they're singing, 'we're here to remind you. Speed it up. Get your stuff put away for the winter!' You listen to the things of nature that [are] gonna tell you when this is ready to be done. That's what I was taught. I don't look at the calendar. I listen for the ripening bug." (Louise, Reserve)

Audrey discussed teachings she had received on the concept of balance in relation to energy in the form of sustenance received from different sources of food, such as those from the local environment compared with more processed or commercially prepared food sources. She explained:

"If you're not in balance with your life and stress has a lot to do with it, you're gonna get sick. If you're not eating properly, one of the things that stresses you a lot is your diet, and it affects your thinking, your behavior, your whole well-being. You're not gonna be well. My mother was not well, and to me that's the effects of residential school. So if you don't deal with your pain or take care of yourself .... I think a lot of people that went to residential school never talked about it. At least we had a roof over our head and a meal on the table, that's how they thought about it, but they never talked about when they were cuffed across the ear and now some of them are deaf, or prodded with a pig prod, pushed down stairs, and molested and there's a lot of children that never made it home. So they just block it and all those blockages ... they know that energy doesn't flow [and] causes unbalance in your life. In our culture we know that there's energy that we get from food, live food, and that live food has energy, so we need to eat those kinds of foods. If you get them out of a can with processed foods, that's not the right energy." (Audrey, London)

## Discussion

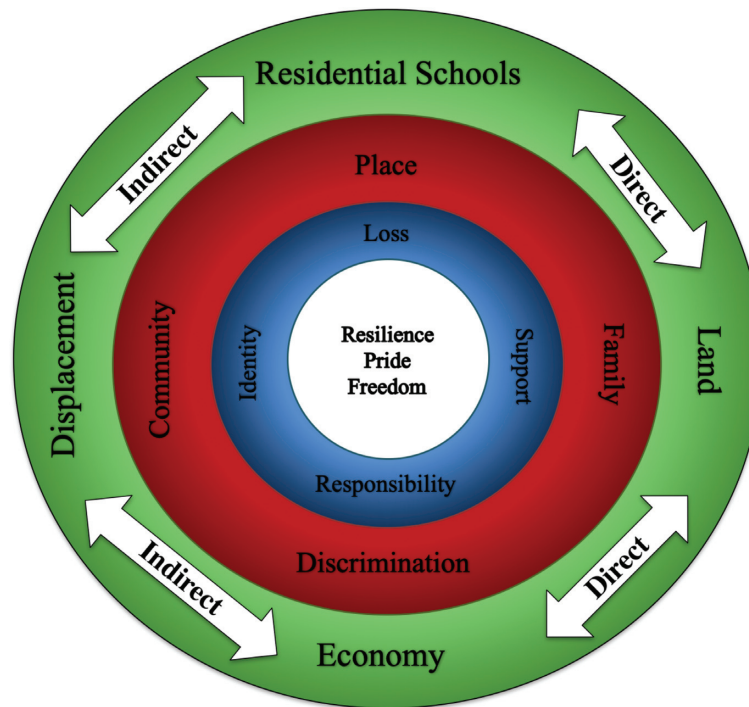
This article was theoretically informed by the SEM to better understand how social, ecological, and historical contexts intersect to shape health inequalities experienced by Indigenous women, in particular those who live with the intergenerational impacts of the residential school legacy. Women's stories presented in the Results section are framed around an adaptation of the SEM (Figure 2). The main thematic areas that arose from the interviews are represented within this framework according to their relations to the core of the model. The inner circle symbolizes the cumulative structural effects of historical, ecological, and social environments on the individual and her relation to food and traditional food systems. Perhaps the most important finding relates to the ways in which processes of environmental dispossession have affected Indigenous food systems and expressions of Indigenous knowledge among Indigenous women in southwestern Ontario. These pathways are indicated in the adapted model as bidirectional arrows. The women who participated in this study discussed painful circumstances of physical displacement from the land and social disconnection from their families and communities. Among the 10 participants who were residential school survivors, the ongoing, intergenerational effects of loss, responsibility, lack of support, and an altered sense of identity as narratives of survival were conveyed. Six women had moved away from their home communities,

which created significantly greater challenges for them in engaging fully in local food procurement and sharing practices. Those women living in London and away from their home communities expressed a sense of disconnection from their culture. The complex pathways and relations represented by this adapted model as altered geographies present practical limitations to belonging, including social and cultural exclusion. The residential school system, aided by patterns of urbanization due to indirect processes of environmental dispossession (such as Bill C-31 under the Indian Act), separated women from their communities and children from their families (40).

Residential school experiences have been identified as a significant factor pushing Indigenous Peoples toward cities (41). For those families who remained on-reserve, the shift from more localized food systems, which included agricultural subsistence farming, to waged economic pursuits appears to have played an important role in dividing extended families from one another and driving families off the land. Participants shared feelings of strong personal loss associated with a disruption of knowledge transfer and altered relationships with their parents, siblings, and extended family. Indigenous learning traditionally takes place through observation and participation in daily activities, which are embedded in the social fabric of family life and the natural environment (42). More of the women living in London shared feelings of disconnection from culture, which can have negative impacts on health and well-being.

Indigenous women living in urban centers tend to carry an extra burden of stress, engage in fewer physical activities, and have compromised healthy diets (6). As mothers, women have fewer opportunities than men and less access to resources such as land, credit, and education (7). They are responsible for gender-determined labor that often includes taking care of children and Elders and completing tasks in the home when men migrate for work (43). Women are also the ones who balance their families' diet on restricted budgets, without sufficient financial or social supports, especially in the case of single parents living away from their home communities. All of these complex life situations, compounded by circumstances of dislocation, amount to circumstances of structural violence that limit opportunities as a result of an unequal power balance (7). These conditions can compromise one's self-determination and human rights, ultimately affecting food and nutrition security negatively.

Although it is acknowledged that there are limitations on these types of conceptual frameworks in capturing complex associations, the SEM has been used by several authors to organize ideas about factors affecting health behaviors and the relations among these factors in Indigenous contexts. Nelson et al. (44) used an adapted SEM to incorporate structural macrosocial factors like history, culture, discrimination (deficit perspectives), and institutions, along with bidirectional distal and proximal connections across social domains, into the determinants of physical activity among Indigenous peoples in Australia. Another model has been adapted to situate causal pathways leading to rising obesity rates among First Nation children in Canada (45). The authors focused on factors such as early life events, family feeding practices, food insecurity, and colonization practices and policies to highlight the multiple levels of influence that must be addressed to prevent obesity in this context. Another Canadian study mapped multiple factors involved in traditional food consumption using an ecological model (15). Their model was purposefully aligned with the Cree concept of health,



**FIGURE 2** Adapted Socio-Ecological Model.

miyupimaatsiium, which goes beyond the idea of individual health to encompass a healthy and respectful relation between the community and the natural environment (46).

Howard (47) illustrates the social and historical realities of residential school as erasing identity and choice by reframing relations with food through decolonization models. Shame and control were often associated with food at residential schools, and the dining atmosphere was connected to abuse, punishment, and humiliation, with the overarching goal of maintaining power over the children. All of these experiences left many former students with negative relations with food. In British Columbia, curricula at residential schools focused on the hygienization of children and the denigration of Indigenous food practices (48). Children were taught to dislike the food their mothers cooked. The idealized dietary standards of consuming from all food groups, however, stood in opposition to the poor quality and quantity of the foods served at many of the schools (47). In later life, residential school survivors linked their preoccupations with food to unhealthy eating habits such as overeating, hoarding food, and eating too quickly (47). These unhealthy associations with food can be normalized and passed on to later generations.

Bombay et al. (49) suggest that it is important to acknowledge the links between individual and collective well-being in First Nation communities as they relate to individual and collective historical trauma, but also to highlight the links between residential school experiences and contemporary determinants of health. These adverse impacts on Indigenous women's health are closely linked to the integrity of the social collectives around them through their sociocultural investments in the nutritional well-being of their families and communities (50). Social disconnection is increasingly identified as a challenge to food sharing.

There are important social dynamics surrounding the meanings associated with food and how these are contextualized in family relationships (51). As people become increasingly disconnected from each other—whether by social or geographical processes—limited interaction prevents them from knowing who in the community may be in need, and providing support. Food socialization is also a central theme in the production of Indigenous health knowledge and practice (52). There is often an intangible interdependence of physical, symbolic, spiritual, and family relationships around food. For Indigenous Peoples, the right to food is linked to land access and their relation with the land, and is formulated as a collective rather than an individual right (53). Reciprocal relations in the form of traditional foodways are intimate and spiritual, and need to be nurtured by maintaining these shared roles (54). The transfer of knowledge within households and communities is embedded in family life and relations to the larger social and physical environments (47).

Family, social organization, and community solidarity experienced individually as loss and potentially restorative powers are important factors in relation to food and its consumption (47). Complex relations with food were reflected in this study as intersecting narratives of loss and resilience. Participants simultaneously conveyed their experiences of social and cultural disruption, resulting from macrohistorical changes beyond their personal control, while recalling the freedom associated with memories of time spent out on the land. It is therefore imperative not to dwell exclusively on the traumatic events of residential school. Howard (47) cautions that these assumptions can throw the community out of balance and deny the strength and resilience that pulled individuals and families through these experiences of historical trauma. They are survivors in many senses of the



word, and need to be perceived as creative, strong, and resourceful women who maintained family and social structures and fed themselves and their children under circumstances of extreme adversity, to put it mildly.

In conclusion, according to this group of Elder women, there are lifelong impacts of historical events, ecological changes, and social disruptions on women's health, sense of self, and relationships with the land, community, family, language, and food. The utilization of traditional foods and knowledge, however, promotes images of pride, freedom, and identity. Reciprocal relationships or shared roles in the maintenance of traditional foodways have also been described as "intimate and spiritual" (54, p. 421). All of these linkages are critically important to build upon expressions of resilience and resistance that were personified by so many of the participants who have experienced such upheaval in their lives. Critical to the restoration of balance and well-being are actions grounded in collective resilience, which re-establishes balance in the mind, body, heart, and soul of individuals, families, communities, and Nations (47). Strengthening these physical ties and social connections serves to foster relationships with the land, food, and each other.

Continued research on Indigenous Peoples' food systems requires further analysis of the root causes of disparities in the context of societal and gender relations (7). On a larger political level, food sovereignty has been the domain of women, who have led food movements aimed at both social and environmental justice (55, 56). Unraveling the historical, social, and environmental determinants of Indigenous food knowledge will support and guide the community and policy recommendations necessary to highlight the ongoing and intergenerational impacts of the residential school experience and other indirect examples of environmental dispossession that have disproportionately affected Indigenous women. There is a need to establish a more comprehensive understanding of the implications of historical trauma, and particularly of the mechanisms by which intergenerational trauma continues to affect Indigenous Peoples' well-being, including the enduring effects potentially hindering knowledge transfer across generations (57). This would include research that examines how the effects of residential schooling are mediated or moderated by other social, cultural, and environmental determinants. The use of similar ecological frameworks could assist researchers and health professionals in gaining a deeper understanding of the macro levels of context influencing rates of obesity and diabetes (12). Research on Indigenous Peoples' food systems necessitates an analysis of the root causes of the health and nutrition disparities experienced, situated within a framework that is representative of these complex contexts (7). Indigenous Peoples possess unique determinants of health and wellness, such as jurisdictional issues related to community self-control and determination (45). Historical factors, such as colonization, dispossession of traditional lands, and assimilation policies, are critical components of a theoretical model, which shows the reciprocity among levels that recognizes that historical factors encompass and influence all ecological levels.

Policy remedies in terms of health advocacy actions require a deeper understanding and awareness within and outside of health systems of the political legacies of residential schools. Improving these ongoing inequities is an obvious public health policy goal in terms of the ef-

fectiveness and sustainability of health systems (20). Divisions among mainstream, specialist, and nonmainstream services can result from top-down approaches that are unable to address complex structural issues (58). Exploring the nature of the intergenerational effects according to gender is critical, taking into consideration the significance of early childhood social environments to lifelong dietary patterns and relations to food. The recognition of women's central role in Indigenous societies is crucial to resisting the colonial undervaluing of women and to restoring balance to all community relationships—not only in terms of progressing toward food sovereignty, but for emotionally and spiritually balanced communities (51). Realigning political efforts to advocate for individual and community self-determination is necessary to consider along with a restoration of balance to reclaim healing, community-based social and intergenerational relationships around food.

To provide increased understanding of these complex and interrelated layers and variables and how they can be targeted in health promotion and interventions, there is a need to identify both risk and resilience factors to facilitate programming that targets not only individuals affected by the IRSS, but families and communities as well (49). From her work on Inuit knowledge systems with Inuit elders, Tagalik (59) makes direct reference to the concepts of balance, interconnection, and holistic thinking as critical to maintaining health and wellness. Investments in social capital are necessary to build mobilization, change, and local control over health and wellness. At the same time, programming aimed at connecting women and food traditions such as storytelling (60), the collective preparation and sharing of meals, promoting healing relations with foods, and fostering positive environmental change with the integration of traditional food practices can have dramatically positive effects, especially for women living in urban settings (47). At the local level, programming could be designed to practice and foster familial and positive environments, including cultural stories about foods and their integration with traditional food gathering, preparation, and eating together. The concept of food sovereignty or self-determination around food practices is not exclusively dependent on resurrecting traditional food practices (51). It also relies on rebuilding the values and social structures, and carrying on the practices, that these reflect for Indigenous Peoples, such as the importance of family and language that make up Indigenous food systems. The emotional impacts on Indigenous women's relations with food, as described by this group of Elders, show the depth and extent of these lasting legacies of colonization that require collective and targeted action that extends far beyond behavioral strategies and across these multifaceted layers of social and ecological spaces.

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